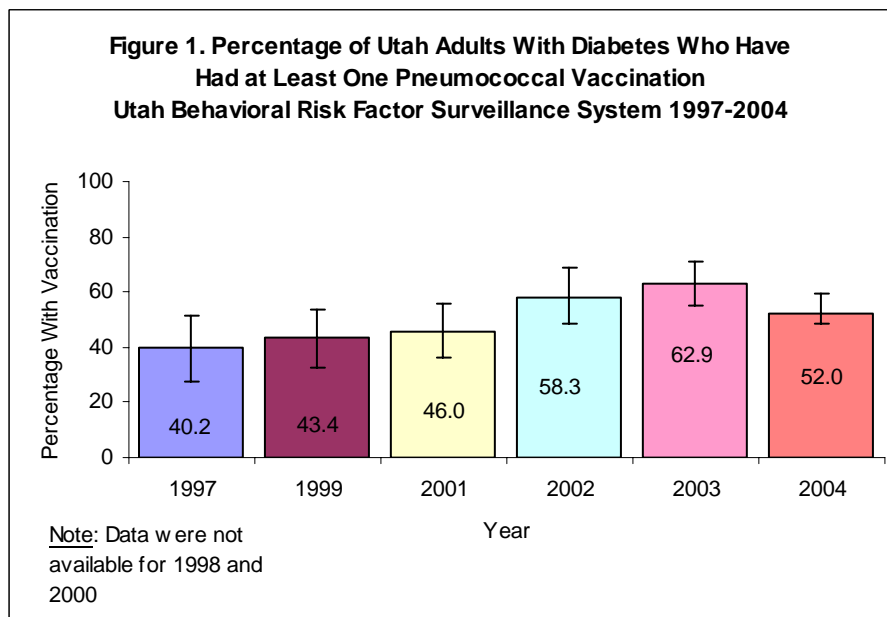


Trends in Pneumococcal Immunizations and Hospital Discharges for Utahns With Diabetes

Pneumonia is a serious life-threatening respiratory disease. In 2004, over 300 Utahns died from pneumonia. A number of factors increase the risk for developing pneumonia, including a compromised immune system, older age, and some chronic conditions. Diabetes is a well-known risk factor for pneumonia. People with diabetes are not only likely to have depressed immune function, but they may also have reduced lung function, making them more susceptible.¹

Public health professionals have encouraged all people with diabetes to be immunized against pneumonia. In particular, the American Diabetes Association formally recommends that people with diabetes have a pneumococcal vaccination at least once by age 65. If the vaccination was obtained before age 60, a second one is recommended after a person reaches age 65, with a minimum of five years between the two doses.²



In general, the percentage of Utah adults with diabetes having obtained at least one pneumococcal vaccination has increased since 1997 (See Figure 1). Although the

¹ RW Thomsen, HH Hundborg, HH Lervang, SP Johnsen, HC Schønheyder, and HT Sørensen. Risk of Community-Acquired Pneumococcal Bacteremia in Patients With Diabetes: A population-based case-control study. *Diabetes Care* 27: 1143-1147, 2004

² American Diabetes Association: Influenza and pneumococcal immunization in diabetes (Position Statement). *Diabetes Care* 27 (Suppl. 1):S111-S113, 2004 [[Medline](#)]

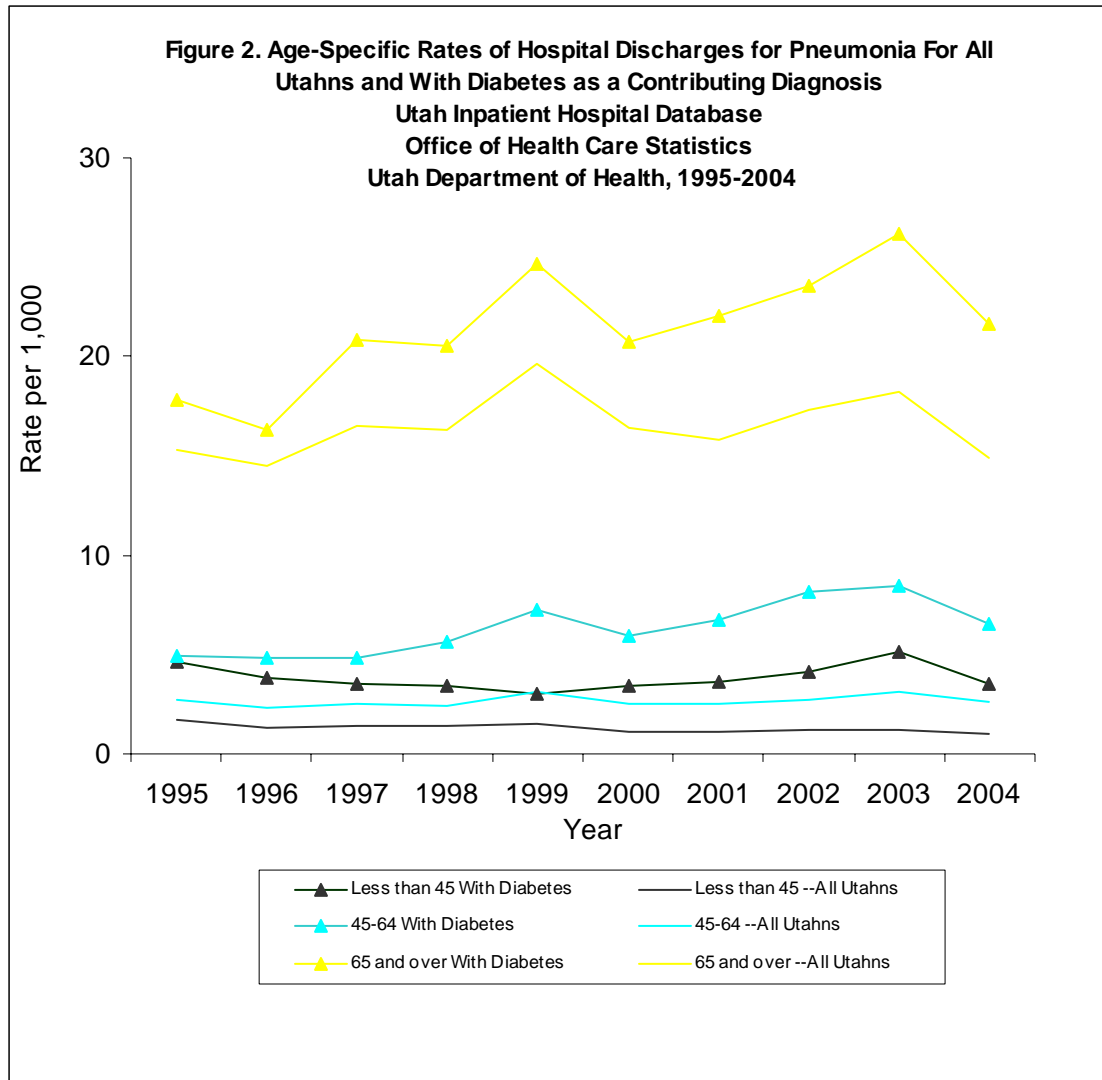
data suggest a slight decline in 2004, the difference is not statistically significant. In the past year, over half of all Utah adults, 18 and over, with diabetes reported having had a vaccination. Utah adults with diabetes who were 65 years of age and older with diabetes had higher rates of obtaining the recommended vaccination than their counterparts under 65. In 2004, three-fourths (70.4%) of Utah adults age 65 or over reported they had received at least one vaccination in their lifetime (not shown).³

People with diabetes have an increased risk of being hospitalized for pneumonia. Each year, about 600,000 U.S. residents are hospitalized for this condition. In Utah, in 2004, there were just over 6,000 hospital discharges listing pneumonia as the principal diagnosis. Among those, 1,040 also listed diabetes as a contributing diagnosis.⁴ Age-specific rates are shown in Figure 2.⁵ Rates for Utahns with diabetes are marked with a ▲ symbol. As may be seen, hospital discharge rates for pneumonia increased with age. The highest rates were for those age 65 and over, regardless of diabetes status. However, having diabetes as a contributing diagnosis also was associated with an increased rate of hospital discharges for pneumonia.

³Office of Public Health Assessment, Utah Department of Health, Behavioral Risk Factor Surveillance System 1997-2004

⁴ Utah Inpatient Hospital Discharge Database, Office of Health Care Statistics, Utah Department of Health 2004

⁵ Rates use ICD-9 codes 480-486 as principal diagnosis. Rates for the population with diabetes use the percentage of the population in each age category with diabetes from the Utah Health Status Survey (2004) applied to the population estimates for 1995-2004.



Pneumonia is a serious condition. Increasing immunization coverage among people with diabetes would help to prevent unnecessary hospitalizations. While a good proportion of Utah adults with diabetes has been vaccinated, more work is needed to increase the numbers.